

Title (en)

LED MIXING CHAMBER WITH REFLECTIVE WALLS FORMED IN SLOTS

Title (de)

LED-MISCHKAMMER MIT IN SCHLITZEN GEFORMTEN REFLEKTIERENDEN WÄNDEN

Title (fr)

CHAMBRE DE MÉLANGE DE DEL MUNIE DE PAROIS RÉFLÉCHISSANTES FORMÉES DANS DES FENTES

Publication

**EP 2745320 A1 20140625 (EN)**

Application

**EP 12781151 A 20120814**

Priority

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- IB 2012054128 W 20120814

Abstract (en)

[origin: WO2013024428A1] A relatively large substrate has a reflective surface, such as a diffusive white surface. LED dies, either as bare LED dies or packaged LED dies, are mounted to the substrate to form separate arrays of LEDs. Each array is intended for a separate mixing chamber. A layer of an encapsulant, such as silicone, is deposited over the substrate to encapsulate the LED dies. A laser etches through the encapsulant to form slots, and a reflective material, such as a white paint, is deposited in the slots to form reflective walls of each mixing chamber. If desired, a phosphor layer is deposited over the encapsulant and reflective walls. The substrate is then singulated to separate out the mixing chambers. Since no discrete parts are assembled, and multiple mixing chambers are formed simultaneously, the resulting mixing chambers are inexpensive and very reliable.

IPC 8 full level

**H01L 25/075** (2006.01); **H01L 33/50** (2010.01); **H01L 33/60** (2010.01)

CPC (source: EP US)

**H01L 25/0753** (2013.01 - EP US); **H01L 33/06** (2013.01 - US); **H01L 33/32** (2013.01 - US); **H01L 33/50** (2013.01 - US); **H01L 33/502** (2013.01 - US); **H01L 33/52** (2013.01 - US); **H01L 33/56** (2013.01 - US); **H01L 33/60** (2013.01 - EP US); **H01L 33/507** (2013.01 - EP US); **H01L 2224/16** (2013.01 - EP US); **H01L 2933/0033** (2013.01 - US); **H01L 2933/0041** (2013.01 - US); **H01L 2933/005** (2013.01 - US); **H01L 2933/0058** (2013.01 - EP US)

Citation (search report)

See references of WO 2013024428A1

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